

REMARKS

This paper is responsive to the Supplemental final Office action, mailed April 24, 2006. Claims 1-30 were examined. Claim 10 stands rejected under 35 U.S.C. § 112, second paragraph. Claims 11-21 are rejected based on rejected Claim 10. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-9 and 22-30 are allowed.

*Allowable Subject Matter*

Applicants appreciate the allowance of claims 1-9 and 22-30. Claim 28 is amended to correct a grammatical error.

Applicants appreciate the indication of allowable subject matter in claim 11. Claim 11 is amended to include limitations of claim 10, to put claim 11 in independent form. Dependent claims 12-14 are amended to depend from claim 11. Accordingly, Applicants respectfully request an allowance of claims 11-21.

*Claim Rejections Under 35 U.S.C. §112*

Claim 10 is amended to improve clarity of the claim. Applicants respectfully traverse the rejection of claim 10 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. The Office Action states that a step of “finding a low cost path”, such as “backtracking from the target location to the source location using the recorded cost functions for each boundary segment” is an omitted essential step. Applicants respectfully point the Examiner to MPEP § 2172.01, which states that “a claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph” (emphasis added). Applicants do not acquiesce that a step of “finding a low cost path”, such as “backtracking from the target location to the source location using the recorded cost functions for each boundary segment” is an omitted step that is critical or essential to the invention. Furthermore, Applicant respectfully maintains that 35 U.S.C. § 112 does not proscribe a gap between steps. Rather, every claim need

not include every element that is part of a device or its operation. 35 U.S.C. § 112, para. 3-4; Mars, Inc. v. Heinz Co., 37 F.3d 1369, 1375; 71 USPQ2d 1837, 1842 (Fed. Cir. 2004); Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364, 1368; 66 USPQ2d 1631, 1634 (Fed. Cir. 2003); Genentech, Inc. v. Chiron Corp., 112 F.3d 495, 498; 42 USPQ2d 1608, 1613 (Fed. Cir. 1997); MPEP §2111.03. For example, 35 U.S.C. § 112, paragraph 4 states that “a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.” In addition, the claim term ‘comprising’ “is open-ended and does not exclude additional, unrecited elements or method steps.” See Mars, 377 F.3d at 1375 (emphasis added); Invitrogen, 327 F.3d at 1368; Genentech, 112 F.3d at 498; MPEP §2111.03.

It is standard for applicants to provide claims that vary in scope and in content, including some elements of a novel device or method, and omitting others...A claim may cover an invention embracing the entire process, machine, manufacture, or composition of matter which is described in the specification, or it may cover such sub-processes or such sub-combinations of the invention as are new, useful, and patentable.

Reiffen v. Microsoft, 214 F.3d 1342, 1347; 54 USPQ2D 1915 (Fed. Cir. 2000) (Newman, J., concurring) (emphasis added). Applicants respectfully maintain that claim 10 satisfies the requirements of U.S.C. § 112, second paragraph. Accordingly, Applicants respectfully request that the rejection of claim 10 be withdrawn.

In summary, claims 1-30 are in the case. All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,



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